Amendments to the Abstract

Replace the abstract with the following replacement abstract:

~~This invention relates to the field of~~ A blood treatment ~~devices having~~ device has a blood purification element ~~(1) which is~~ divided into two chambers by a semipermeable membrane ~~(3)~~. ~~Such devices are used as hemodialysis machines in artificial kidney therapy. This invention improves upon such a blood treatment device to the extent that~~ With the device, nonphysiological conditions of the patient, in particular critical potassium concentrations and withdrawal rates, can be better prevented during the blood treatment. ~~According to this invention, it is provided that the~~ The device's analyzer unit ~~(32) of the blood treatment device~~ determines on the basis of at least one sensor ~~(31)~~ the concentration of ~~this~~ a substance in the blood in the blood inlet line, the instantaneous transfer rate of this substance through the membrane, and the total quantity of this substance withdrawn during the treatment[[;]]. ~~this~~ The determined concentration is compared with a first admissible value range, the transfer rate is compared with a second admissible value range, and the quantity of the substance withdrawn is compared with a third value range[[;]]. ~~and the~~ The device's control unit ~~(34) which controls the blood treatment device~~ can instruct the device ~~to the extent~~ such that the blood treatment device performs the blood treatment while maintaining all three admissible value ranges.

~~Fig.~~

For the examiner's convenience, a clean text version of the replacement abstract (149 words) is presented below:

A blood treatment device has a blood purification element divided into two chambers by a semipermeable membrane. With the device, nonphysiological conditions of the patient, in particular critical potassium concentrations and withdrawal rates, can be better prevented during the blood treatment. The device's analyzer unit determines on the basis of at least one sensor the concentration of a substance in the blood in the blood inlet line, the instantaneous transfer rate of this substance through the membrane, and the total quantity of this substance withdrawn during the treatment. The determined concentration is compared with a first admissible value range, the transfer rate is compared with a second admissible value range, and the quantity of the substance withdrawn is compared with a third value range. The device's control unit can instruct the device such that the blood treatment device performs the blood treatment while maintaining all three admissible value ranges.